

Testing Your Recall

name _____

date _____

1. Define the following terms:

- Work
- Mechanical Advantage

2. Describe the difference between work and force.

3. Name the two things you need to know in order to measure work.

4. Give two examples of a lot of work.

5. What is the equation for calculating work?

6. Draw an example of how a machine can increase your mechanical advantage.

7. List or draw four simple machines.

8. Describe what happens to distance when a simple machine helps reduce force.

9. Use the words work and mechanical advantage to describe how a simple machine might help you lift something you would not normally be able to lift.

Apply What You Learned

name _____

date _____

Read the passage and complete the instructions below.

After a day of working in *The Pit*, even Joe Shmo couldn't stand the smell of himself. He went home and took a long soak in a hot bubbly bath. The next day he put on clean overalls and went to work. When he arrived at Robocorp, Joe was amazed to find that, for the first time, his co-workers didn't run off holding their noses. Even Miss Bee, whom he had admired from afar for many years, became friendly. So friendly that she invited him to go dancing with her that night. "Call me Flo," she said winking at Joe. "See you tonight!"

After work Joe rushes home, takes another bath, puts on his best shirt, and looks for his dancing shoes. To his dismay he discovers that they are stored away in a box under his very heavy bowling trophy. If Joe lifts the trophy, he might get sweaty and smelly and ruin his date with Flo. How can Joe get his dancing shoes without getting sweaty and smelly?

1. In your own words, describe the problem above.

2. Convince Joe how a greater mechanical advantage could help him get his shoes with less sweat.

3. Which simple machine do you think Joe should use to get his dancing shoes. Why?
Draw a picture of how you think the machine can help.